

LABKOVSKIY, YA. M.

USSR/Physics

Oct 48

Liquids, Supercooled  
Crystallization

"The Formation of Centers of Crystallization in Supercooled Liquids," V. I. Danilov,  
O. D. Kozachkovskiy, Ya. M. Labkovskiy, Inst of Metallophys, TsNII of Ferrous Metal,  
6 3/4 pp

"Zhur Eksper i Teoret Fiz" Vol XVIII, No 10

Investigates process of activating impurities in salol. Discusses experimental  
relationships from standpoint of formation of molecular contact between two solids.  
Submitted 10 Apr 48/

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LABKOVSKIY, Ya. M.

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PHASE I BOOK EXPLOITATION SOV/5469

Soveshchaniye po kriticheskim yavleniyam i flyuktuatsiyam v rastvorakh. Moscow, 1960.

Kriticheskiye yavleniya i flyuktuatsii v rastvorakh; trudy soveshchaniya, yanvar' 1960 g. (Critical Phenomena and Fluctuations in Solutions; Transactions of the Conference, January 1960) Moscow, Izd-vo AN SSSR, 1960. 190 p. 2,500 copies printed.

Sponsoring Agencies: Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk. Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova. Khimicheskii fakul'tet.

Responsible Ed.: M. I. Shakhparonov, Doctor of Chemical Sciences, Professor; Ed. of Publishing House: E. S. Dragunov; Tech. Ed.: S. G. Tikhomirova.

PURPOSE | This collection of articles is intended for scientific personnel concerned with chemistry, physics, and heat power engineering.

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Critical Phenomena and Fluctuations

SOV/5469

COVERAGE: The book contains 24 of the 26 reports read at the Conference on Critical Phenomena and Fluctuations in Solutions organized by the Chemical Division of Moscow State University, January 26-28, 1960. The reports contain results of investigations carried out in recent years by Soviet physicists, chemists, and heat power engineers. The Organizing Committee of the Conference was composed of Professor Kh. I. Amirkhanov, A. Z. Golik, I. R. Krichevskiy (Chairman), V. K. Semenchenko, A. V. Storonkin, I. Z. Fisher, and M. I. Shakhparonov (Deputy Chairman). References accompany individual articles.

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Akhadov, Ya. Yu., and M. I. Shakhmurov [Laboratoriya fiziko-khimii rastvorov, Khimicheskiy fakul'tet, Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova -- Laboratory of the Physical Chemistry of Solutions, Chemistry Division, Moscow State University imeni M. V. Lomonosov]. Dielectric Properties of Solutions in a Superhigh Frequency Field and Concentration Fluctuations

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LABKOVSKIY, YA. M.

27593. DANILOV, V. I., KOZACHKOVSKIY, O. D. i LABKOVSKIY, YA. M. Aktivatsiya  
primesey v salole. [Voprosy Kristallizatsii] V sb: Problemy metallovedeniya i  
fiziki metallov m., 1949, s. 70-79.

SO: Letopis' Zhurnal'nykh Statey, Vol. 37, 1949

*LABKOVSKIY Ya. M.*

DANILOV, V.I.; KOZACHKOVSKIY, O.D., kand.fiz.-mat.nauk; LABKOVSKIY, Ya.M.

Activation of impurities in salol. Probl.metalloved.i fiz. met.  
no.[1]:70-79 '49. (MIRA 11:4)

1.Laboratoriya kristallizatsii Tsentral'nogo nauchno-isslefovatel'skogo  
instituta chernoy metallurgii. 2. Chlen-korrespondent AN USSR (for  
Danilov).

(Salol) (Activity coefficients)

MOKHOV, N.V.; LABKOVSKIY, Ya.M.

X-ray diffraction study of the isothermal compressibility of  
ether and benzene. Ukr. fiz. zhur. 7 no.8:816-820 S '62.  
(MIRA 16:1)

1. Dnepropetrovskiy universitet.  
(X rays--Diffraction) (Ether) (Benzene)

МОКHOV, H.V.; ЛАВКОВСКИЙ, Ya.M.

Fluctuant formations in ether and benzene and their variation  
with temperature. Ukr. fiz. zhur. 9 no.5:465-470 Ky '64. (HIRA 17:9)

1. Dnepropetrovskiy gosudarstvennyy universitet.

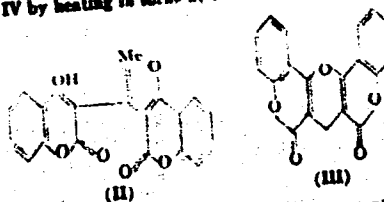
PURIN', B. [Purins, B.] (Riga); LABLAIS, G. (Riga); BUZHINSKA, V. (Riga)

Electrodeposition of zinc from acid ammonium chloride electrolytes.  
Vestis Latv ak no.2:123-128 '60. (ERAI 10:1)

1. Akademiya nauk Latvyskoy SSR, Institut khimii.  
(Zinc) (Amonium chloride) (Electrolytes)

Anticoagulants. XII. Synthetic proof of the constitution of 3-[cumarin-5',4':3,2'-5'-methyl-4'-furyl]-3-hydroxycumarin. Karel Folták and Ludvík Lábeš (Pharm. Biochem. Research Inst., Prague, Czech.). *Chem. Listy* 45, 490-4 (1951); cf. *ibid.* 484, 488; C.A. 45, 10245f. Synthetically prepd. 1,1-bis(4-hydroxy-3-cumarinyl)-2-propanone (I) treated with  $\text{CH}_3\text{I}$  gave the di-Me ether, m. 245° (from EtOH or 70% AcOH). I reduced with  $\text{H}_2\text{SO}_4$  in AcOH yielded 77.5% 3-[cumarin-5',4':3,2'-5'-methyl-4'-furyl]-3-hydroxycumarin (II), m. 293° [ $\text{Et}_3\text{NH}^+\text{ salt}$ , m. 252° (from EtOH)]. II with  $\text{AgO}$  gave the  $\alpha$ -acetal, m. 252° (from  $\text{Me}_2\text{CO}$ ), also obtained by reducing I with  $\text{AgO}$ . 4-Acetylcumarin-5',4':3,2,3',4':5,6)pyran (III), m. 305° (from cyclohexanone), was isolated as a by-product in the

anhydrazide of I either with  $\text{SOCl}_2$  or  $\text{Ac}_2\text{O}$ . I with  $\text{Ac}_2\text{O}$  in a  $\text{C}_6\text{H}_{11}\text{N}$  at room temp. gave 1,1-dimethyl-3-oxo-2-methyl-2-(3-oxocyclopropyl)propane (IV), m.  $186^\circ$  (from EtOH). A benzene of IV, m.  $177^\circ$  (from EtOH), was obtained when  $(\text{EtCO})_2\text{O}$  was used instead of  $\text{Ac}_2\text{O}$ . IV was transformed to III, m.  $301^\circ$ , and to the meso-acids V of III, m.  $269^\circ$  (from pyridine), by boiling with dil. AcOH. V was also obtained from IV by heating in vacuo at  $180\text{--}190^\circ$  and gave III with



(II) The *cis*-propionide of III, m. 247-8° (from cold H<sub>2</sub>O). The *cis*-propionide from the propionic analog C<sub>6</sub>H<sub>9</sub>N, was obtained analogously from the propionic analog of IV. The melting of III, m. 251° (from dil. CuH<sub>2</sub>) was prepurified from II by the di-Me deriv. of I by refluxing with NH<sub>4</sub>OH.HCl in CuH<sub>2</sub>. Prepn. of I: 4-Hydroxycoumarin (5.0 g.) dissolved in 64 ml. boiling water and boiled 3 min. with 3.0 g. AcCH<sub>3</sub>:NH<sub>2</sub> in 30 ml. H<sub>2</sub>O deposited 4 g. I in crystals, m. 246° (from AcOH); Ea/NH salt, m. 198° (from EtOH). XIII. Synthesis of 1,1-bis-(4-hydroxy-3-methyl)-2-propanone. K. Fritsch and S. Kolitzek. *Ibid.* 48(1), 1-16. Bis-(4-hydroxy-3-coumariny)-2-propanone was synthesized by treating the salts of 4-hydroxycoumarin synthesized with CaCH<sub>3</sub>Ac (II) under various conditions and subjecting the reaction mixt. to paper chromatography. The best yields were obtained by refluxing the K salt of I in water with II. The reaction required prolonged heating or a higher temp. when carried out in EtOH. M. Hudlicky



SORM, F.; LABLER, L.; CERNY, V.

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Steroids. Part 6. 3-dimethylamino derivatives of steroids [in Russian with summary in English]. Sbor.Chekh.khim.rab. 18 no.6:842-853 D '53. (MLRA 7:6)

1. Department of Natural Products, Institute of Organic Chemistry,  
Czechoslovak Academy of Science, Prague. (Steroids)

LABLER, L.

SORM, F., LABLER, L., CERNY, V.

"Steroids. Part 6. Steroid 3-Dinethyla-Mino-Derivatives," p. 418.  
(Chemicke Listy, Vol.47, No.3, Mar. 1953, Praha.)

S0: Monthly List of East European Accessions, Vol.2, No.9, Library of Congress, September  
1953, Uncl.

LABER, LUDVÍK

CZECH

Horáček, Xii. Determination of the configuration of 3-dimethylamino derivatives of cholesterol. Ludvík Laber, Václav Černý, and František Šorm (Czechoslovak Academy of Sciences, Prague). *Chem. Listy* 48, 1008-09, Collection Czechoslov. Chem. Commun. 19, 1849-57 (1954) (in English); cf. C.A. 49, 850a. — Previously prep. 3-dimethylaminocholesterol (I) was proved to have 3 $\beta$ -configuration. Cholestanone (8 g.) in 250 ml. 90% EtOH, treated at room temp. with 48 g. KCN and 51 ml. AcOH, pouring the mixt. (after 5 hrs.) into 1 l. H<sub>2</sub>O, extg. the sepd. solid cholestanone cyanohydrin with AcOEt-CHCl<sub>3</sub>, washing the ext. with H<sub>2</sub>O, 3% HCl, and H<sub>2</sub>O, and evapg. the soln. in vacuo at 40° yielded 5.7 g. cyanohydrin which was dried azeotropically and dehydrated by refluxing 4 hrs. with 45 ml. C<sub>2</sub>H<sub>5</sub>N and 5 ml. POCl<sub>3</sub>. The crude 3-cyano-2(or 3)cholestene (5.47 g.) m. 129-30°,  $[\alpha]_D^{25}$  77°, obtained by pouring the dehydrated mixt. into H<sub>2</sub>O and by extg. of the mixt. with Et<sub>2</sub>O. Hydrogenation of 5.6 g. unsatd. nitrile in dioxane over 5% Pd/CaCO<sub>3</sub> at 10° and 749 mm. gave 3.7 g. 3 $\beta$ -cyanocholestanol (II), m. 149.5-51° (from EtOH). Disig. II (0.95 g.) with a mixt. of 3.2 g. NaOH, 5 ml. H<sub>2</sub>O, and 50 ml. MeO-CH<sub>2</sub>CH<sub>2</sub>OH until the temp. rose to 125°, refluxing the mixt. 7 hrs., pptg. the Na salt with equal amt. of Et<sub>2</sub>O, decmpg. the aq. suspension of the salt with 16% HCl, and extg. the free acid (III) with Et<sub>2</sub>O gave 620 mg. crude and 755 mg.

KABLER, L.

CZECH

2820. Steroids. XIII. Paper chromatography of steroid amines. Z. Procházka, L. Kabler and Z. Kotásek (Chem. Listy, 1984, 48-49, 1066-1070). The paper chromatography of a number of lipophilic steroid amines is described. Amines containing one nitrogen atom were separated by means of moist butyl acetate or the solvent system light petroleum (as stationary phase) - aq. ethanol. The separation of the steroid alkaloids from the bark of *Holarrhina antidyenterica* was effected by the systems pentanol - acetic acid - water (top layer) or water-saturated, weakly acid sec. butanol on paper impregnated with KCl, or, best, light petroleum - aq. alkaline ethanol. The spots were detected by iodine vapour or the Krant - Dragan - dorf reagent. G. GLASER

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LABLER A. D. K.  
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CZECH

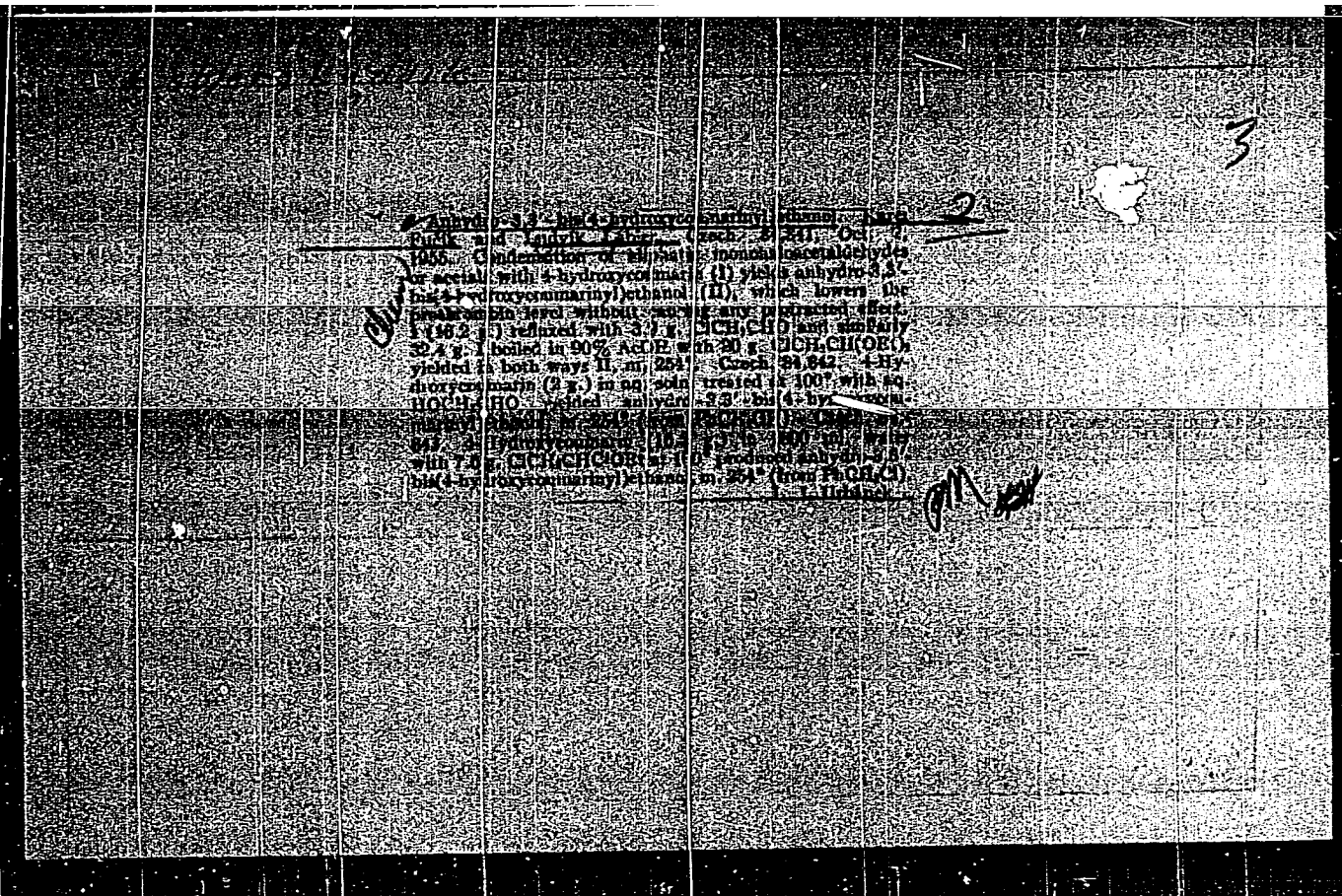
✓ Steroids. XIV. Rearrangements of basic 3,5-cyclo-  
cholestanes. Ludvík Lábler and František Šorm (Czechoslovakia). *Chem. Listy* 48, 1378-81 (1954); *Chem. Abstr.* 49, 9073a (1955).  
Collection: *Chem. Commun.* 20, 188-91 (1955).  
(In Russian); *Chem. Commun.* 20, 188-91 (1955).  
arrangements of substituted 6-amino-3,5-cyclocholestanes  
lead to 2-substituted 5-cholestenes. Heating HCl salt of 6-  
dimethylamino-3,5-cyclocholestan-1 (I) (0.5 g.) (m. 198°)  
at 210° in a stream of dry HCl and triturating the cooled  
product with Et<sub>2</sub>O gave 0.16 g. of recovered product, m.  
by evapn. of the filtrate, 0.3 g. 3β-chloro-5-cholestene, m.  
01-3° (from EtOH and from Me<sub>2</sub>CO). Heating 20 g. 23-  
tosyloxy-5-cholestene with 120 ml. liquid MeNH<sub>2</sub> 17 hrs.  
at 100° in an autoclave, extg. the mxt. with Et<sub>2</sub>O, wash-  
ing the ext. with 5% NaOH, evapn. the solvent, and  
chromatographing the residual oil (14 g.) yielded 1.5 g. 6-

LUDVIG HADLICKY

methylamino-3,5-cyclocholestan-11-ol (II), m. 57-58° (from MeCO), [α]<sub>D</sub><sup>20</sup> 27°, and 3.1 g. 3α-methylamino-5-cholestan-11-ol (III) (from MeCO). Refluxing 0.23 g. I, 2.5 ml. HCO<sub>2</sub>H, and 3 ml. 40% CH<sub>3</sub>O 4 hrs. at 100°, dilg. the mixt. with H<sub>2</sub>O, filtering off the ppt., dissolving it in 25 ml. hot MeOH, treating with 30 ml. 0.1N NaOH, and refluxing the mixt. 2 hrs., gave after cooling 0.10 g. and by evapn. of the mother liquors 0.087 g. cholesterol (III), m. 147°. Heating 0.2 g. II, 1 ml. HCO<sub>2</sub>H, and 1.5 ml. 40% CH<sub>3</sub>O 3 hrs. at 100°, dilg. the mixt. with H<sub>2</sub>O, alkalinizing with aq. NH<sub>3</sub>, sepn. the ppt., dissolving it in 10 ml. hot MeOH, treating the soln. at the boiling temp. with 30 ml. 0.1N NaOH, and refluxing the mixt. 1 hr., evapn. 30 ml. of the solvent, and pouring the residue into water gave, by ether extr., 0.104 g. III. The same product was obtained by refluxing 0.2 g. II with 1 ml. AcOH and 1.5 ml. 40% CH<sub>3</sub>O 4 hrs. at 100°. No rearrangement occurred by heating II with HCO<sub>2</sub>H without CH<sub>3</sub>O.

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M. Hadlicky







LABLER, L.; SORM, F.

Steroids. XIV. Rearrangement of basic 3, 5-cyclocholestanes. In Russian. p. 188

Vol. 20. no. 1, Feb. 1955

SBORNIK CHEKHOSLOVATSKIKH KHMICHESKIKH RABOT  
Praha, Czechoslovakia

So: Eastern European Accession Vol. 5, No. 4, April 1956

LÁBLER, LUDOVÍK

CZECHOSLOVAKIA/Organic Chemistry. Natural Substances E-3  
and Their Synthetic Analogues.

Abs Jour: Ref Zhur - Khimiya, No. 8, 1957, 26968.

Author : Lábler, Ludovík, Černý, Václav; Šorm, František.

Inst :

Title : Steroids. XIX. Proof of Structural Connection  
between Holarrhimine and Conessine.

Orig Pub: Sb. chekosl. khim. rabot, 1955, 20, No. 6,  
1484 - 1489; Chem. listy, 1955, 49, No. 9,  
1389 - 1394.

Abstract: It was shown by the conversion of dihydrotetra-  
methylholarrhimine (I) into derivatives of co-  
nessine that holarrhimine (III) has a steroid  
skeleton with a 3  $\beta$ -amino group. This experi-  
mentally proved the assumption (see Siddiqui S.,  
Pres. Ind. Acad., 1936, A3, 249; RZhKhim, 1954,

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CZECHOSLOVAKIA/Organic Chemistry. Natural Substances E-3  
and Their Synthetic Analogues.

Abs Jour: Ref Zhur - Khimiya, No. 8, 1957, 26968

benzene extracts 164 mg of 5,6-dihydroconessimethine (VI), melting point 64 to 65° (from aqu. acetone), and ether extracts 155 mg of dihydroconessine (VII), melting point 107° (from ace-

tone),  $[\alpha]_D^{20} + 51.8^\circ$  (c 3.3, in chlorof.). 805 mg of n-toluene sulfonate of monomethyldihydroconessine (VIII), melting point 218 to 221°

(from acetone-CH<sub>3</sub>OH),  $[\alpha]_D^{20} + 23^\circ$  (c 2.6; in CH<sub>3</sub>OH, is obtained after leaving 1 g of I staying in 80 ml of pyridine with 490 mg of n-toluene-sulfonchloride for 12 hours, following evaporation in vacuum until dry, neutralization of the aqueous solution of the residue with 500 mg of

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CZECHOSLOVAKIA/Organic Chemistry. Natural Substances  
and Their Synthetic Analogues.

E-3

Abs Jour: Ref Zhur - Khimiya, No. 8, 1957, 26968.

$\text{KHCO}_3$ , and extraction with  $\text{CHCl}_3$ . 923 mg of VII is boiled 30 min with 270 mg of NaI in 130 ml of acetone, 750 mg of moniodomethylate of VII (VIIa) is obtained, melting point  $302^\circ$  to  $304^\circ$  (from acetone- $\text{CH}_3\text{OH}$ ),  $[\alpha]_D^{25} +31^\circ$  (c 2.7; in  $\text{CH}_3\text{OH}$ ). By boiling 750 mg of VIIa with 1.3 ml of  $\text{CH}_3\text{I}$  and 10 ml of  $\text{CH}_3\text{OH}$  for 0.5 hour, 735 mg of diiodomethylate of VII (IX) is received, melting point  $319^\circ$  to  $320^\circ$  (from alc.-acetone),  $[\alpha]_D^{25} +25^\circ$  (c 3.0; in  $\text{CH}_3\text{OH}$ ). 90 mg of VI (washed out with benzene) are obtained from 735 mg of IX by splitting according to Hoffmann and chromatographing with  $\text{Al}_2\text{O}_3$ . The infrared spectra of the obtained substances are attached. See RZhKhim, 1956. 71799 for report XVIII.

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**Stable, Rigid Structure of Adamantane** V. M. Cern, Leavik Table, and Donald Sagan (Cannett, abstr. 765, Pages). *Chem. Zvesti* 25, 1125-22 (1968), 2 C.A.B. 15571c. *Don. All. V. M. Cern, Leavik Table, and Donald Sagan* (I) prepd. from 39,310-bis (dimethylamino)-10-cyanoheptanoic acid (II) was found to be identical with 39,310-14 (dimethylamino)-allipropene (I) prepd. either from 34-acetylthiobarallobenzoic acid (III), or from 20-acetoxy-20-cyanoheptanoic acid (IV). Heating 250 mg. II with 550 mg. 80% NaOH, 1.0 ml. EtOH, and 240 mg. Na 52 hrs. at 200-10° under N in a sealed tube, dilg. the mixt. with H<sub>2</sub>O, extg. with Et<sub>2</sub>O, and chromatographing the ext. on C<sub>60</sub>H<sub>12</sub> col. over 6 g. Al<sub>2</sub>O<sub>3</sub> gave, by C<sub>60</sub>H<sub>12</sub> elution, 50 mg. oil, from which was obtained 45 mg. cryst. I, m. 123-4° (from Me<sub>2</sub>CO), [α]<sub>D</sub><sup>20</sup> +26°. The compound is diamagnetic; the other form, isolated from another expt., m. 106-8°, [α]<sub>D</sub><sup>20</sup> 14°. It can be transformed to the first form by seeding the soln. in Me<sub>2</sub>CO. Treating 4.23 g. IV, m. 142-4°, with 1 ml. NH<sub>4</sub>OH.HCl in 5 ml. pyridine, adding 17 ml. pyridine, allowing to stand overnight, dilg. the mixt. with H<sub>2</sub>O and extg. with Et<sub>2</sub>O gave 4.15 g. crystals of IV, m. 126-7°, [α]<sub>D</sub><sup>20</sup> +13°. Further treatment of 5.97 g. IV, m. 126-7°, with 1 ml. NH<sub>4</sub>OH.HCl in 5 ml. EtOH, 10 ml. Et<sub>2</sub>O, and 10 ml. H<sub>2</sub>O, dilg. the mixt. with H<sub>2</sub>O, and extg. with Et<sub>2</sub>O, gave 4.15 g. crystals of IV, m. 126-7°, [α]<sub>D</sub><sup>20</sup> +13°. Further treatment of 4.15 g. IV, m. 126-7°, with 1 ml. NH<sub>4</sub>OH.HCl in 5 ml. EtOH, 10 ml. Et<sub>2</sub>O, and 10 ml. 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*CCNY, Vasilav, Lohar, Ludvik...*

Et<sub>2</sub>O gave 877 mg. 22-hydroxy-20S-dimethylsuccinylpropane (VIIa), m. 178.5-9° (from Et<sub>2</sub>O), [α]<sub>D</sub><sup>25</sup> 12.5°. Oxidation of 877 mg. VIIa in 30 ml. 4N NaOH with 300 mg. CrO<sub>3</sub> in 2 ml. H<sub>2</sub>O at room temp. overnight, dil. of the mixt. with ice, alkalization with NH<sub>4</sub>OH, and steam with Et<sub>2</sub>O gave 487 mg. 3-oxo-20S-dimethylsuccinylpropane (VIIb), m. 156-61° (from Me<sub>2</sub>CO), [α]<sub>D</sub><sup>25</sup> 34°. A solution of 860 mg. VIIa, 490 mg. 1N H<sub>2</sub>SO<sub>4</sub>·HCl, and 30 ml. C<sub>2</sub>H<sub>5</sub>N to stand overnight at room temp. 2 days, dil. the mixt. with 10% NaOH, alkalizing with 2N NaOH, and extg. with Et<sub>2</sub>O gave 280 mg. VIIa crystals, m. 240-4° (from Et<sub>2</sub>O). Reducing in the reflux of 5 hrs. at 120° with 25 g. Na to 2.0 g. VIIa takes in 18 ml. AmOH, dilg. the soln. with ice, acidifying with 2N H<sub>2</sub>SO<sub>4</sub>, steam distg. the AmOH, extg. the soln. with Et<sub>2</sub>O, evap. the Et<sub>2</sub>O layer, evap. the Et<sub>2</sub>O dissolved in the aq. layer with steam, alkalizing the soln. with 2N NaOH, extg. the base with Et<sub>2</sub>O, evap. the ext., heating the residue (250 mg.) to 180° on the steam bath with 140 mg. 2,2-NC<sub>2</sub>H<sub>4</sub>CHO, decoupling the resulting crystals (218 mg.) by heating with 20 ml. 2N H<sub>2</sub>SO<sub>4</sub>, reacting the 2,2-NC<sub>2</sub>H<sub>4</sub>CHO with Et<sub>2</sub>O, alkalizing the aq. layer with 2N NaOH, extg. the base with Et<sub>2</sub>O, evap. the ext., heating to 180° (248 mg.) 4 hrs. at 100° with 10 ml. 40% CH<sub>3</sub>CO and 13.8 ml. HClO<sub>4</sub>, dilg. the mixt. with 10 ml. H<sub>2</sub>O, steam distg. alkalizing with NH<sub>4</sub>OH, and extg. with Et<sub>2</sub>O gave 50 mg. 20S-20S-dimethylsuccinylpropane (VIII), m. 128.6-85° (from Me<sub>2</sub>CO), [α]<sub>D</sub><sup>25</sup> 17°. Fusion of Vb (247 mg.) with 28 mg. K<sub>2</sub>CO<sub>3</sub> in 1 ml. Et<sub>2</sub>O and 0.5 ml. EtOH gave 180 mg. 20S-20S-dimethylsuccinylpropane (IX), m. 170-171° (from Me<sub>2</sub>CO), [α]<sub>D</sub><sup>25</sup> 25°. The pure product, m. 170-171° (from Me<sub>2</sub>CO), was obtained from IIIa by low temp. treating 1 g. IIIa, m. 103°, with 2 ml. 90% CH<sub>3</sub>CO, dilg. the crude product of IIIa, m. 103°, in 24 ml. Me<sub>2</sub>CO, adding a soln. of 500 mg. NaN<sub>3</sub> in 2.1 ml. H<sub>2</sub>O with ice cooling, dilg. the mixt. after 10 min. with 60 ml. ice water.

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CZECHOSLOVAKIA/Organic Chemistry. Natural Products and Their  
Synthetic Analogues.

G-3

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81782.

Author : Labler L., Cerny V.

Inst :

Title : Steroids. XXXIII. Holarredine, a New Alkaloid from the  
Bark of the Holarrhena Antidysenterica Wall.

Orig Pub: Chem. listy, 1957, 51, No 12, 2344-2350.

Abstract: By the investigation of holarremine  $C_{21}H_{36}ON_4$  (I),  
the authors have developed a modified method for  
isolating alkaloids, by the help of which method  
it was possible to detect in the bark of Holarrhena  
antidysenterica in addition to I, N, N', N'-  
tetramethyl-I and conessin, a new alkaloid named

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by the authors as holarredine  $C_{15}H_{25}ON$  (II).  
II does not contain the N-methyl and the  $CH_3O$  -  
groups and it has one double bond. The bark (10 kg)  
was extracted twice with 30 liters of alcohol con-  
taining 3 liters of concentrated ammonia, the extract  
was acidified with 30% sulfuric acid in the presence  
of ice, it was condensed, washed with chloroform, and  
made alkaline with 20% NaOH, and the basic compounds were  
then extracted with ether. By the concentration 139  
grams of crude bases were obtained, which were then  
agitated with one liter of petroleum ether for 8 hours.  
The insoluble part (A) was a powder-like compound  
weighing 31 grams. The solution after concentration  
gave 107 grams of oil (B). After 15 minutes of boiling

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Abs Jour: Ref Zhur-Khim., No 24, 1958, 81782.

with  $n\text{-NC}_6\text{H}_4\text{CHO}$  in alcohol, part A gave  $N,N'$ -bis-(p-nitrobenzylidene)-I, m.p.  $275^\circ\text{C}$ . (the mother liquor B) which upon boiling with 2N sulfuric acid and by boiling the separated product with alcohol gave the sulfate of I, m.p.  $339^\circ\text{C}$ . The base was separated by the action of ammonia, extracted with chloroform, afterwards with  $\text{HClO}_4$  (from chloroform), precipitated with alkali and extracted with ether. Only 0.028% of I was obtained (calculated in respect to the dry bark), m.p.  $185\text{--}186^\circ\text{C}$ . (from ether),  $d_4^{20} 1.17$  (c 3.9; chloroform); monopicate m.p.  $240\text{--}242^\circ\text{C}$ .; dipicate  $\text{C}_{22}\text{H}_{14}\text{O}_{12}\text{N}_4 \cdot \text{H}_2\text{O}$ , m.p.  $148\text{--}153^\circ\text{C}$ .; the tetramethyl derivative was identical with the following compounds: O-benzoyl-N,N,N',N'-tetramethylhol-

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Abs Jour: Ref Zhur-Khin., No 24, 1958, 81782.

arrymine, m.p. 173-174°C.; O-acetyl-N, N, N', N'-  
tetramethylolarrymine, m.p. 139-140°C. by boiling  
for 2 hours with methanol solution of NaOH, gives the  
tetramethyl I. After concentration of the mother  
liquors B, the remainder was dissolved in chloroform,  
the base was separated with ammonia and was extracted  
with chloroform. With the help of cinnamic acid in  
alcohol, the salt was precipitated, from which the base  
was again separated by the action of ammonia, which  
base was again purified with the help of the salt of  
cinnamic acid. After separation by the action of am-  
monia, extraction with chloroform, concentration by  
evaporation and crystallization from a mixture of  
tetrahydrofuran - water, II was obtained, yield 0.026%,

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Abs Jour: Ref Zhur-Khim., No 24, 1958, 81782.

n.p. 181-182°C,  $[M]_D^{20} -23^\circ$ . The N, N, N', N'-tetra-  
methyl-II  $C_{13}H_{19}ON_4$ , n.p. 163-164°C,  $[M]_D^{20} -34^\circ$   
(c 1.97; chloroform) was synthesized by heating II  
with formic acid and formaldehyde on water bath  
for 4 hours. In the same way part B was methylated,  
the product was washed with acetone, mixed with  
petroleum ether and filtered by suction. After  
crystallization from alcohol, the insoluble part  
gave N, N, N', N'-tetramethyl-I,  $C_{13}H_{19}ON_4$ , n.p.  
227-228°C,  $[M]_D^{20} -34^\circ$  (c 3.7; chloroform),  
yield 0.56%; the product is identical with the  
synthetic one. Conessine was obtained from the  
petroleum ether solution upon concentration and

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Abs Jour: Ref Zhur-Khim., No 24, 1958, 81782.

crystalliaation from acetone, m.p. 124-125°C., *AK*  
D + 26° (c 3.3; alcohol), yield 0.4%. Communication  
XXXII, see R. Zh Khim., 1958, 64602.

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Synthetic Analogues.

G-3

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81783

Author : Cerny V., Labler L., Sorm F.

Inst :

Title : The Steroids XXXIV. The Structure of Holarrhedine

Orig Pub: Chem. listy, 1957, 51, No 12, 2351-2355.

Abstract: The authors have suggested a structural formula  
3 $\alpha$ , 20 $\alpha$ -diamino-18-oxy- $\Delta^5$ -pregnen for  
holarrhydyne (I) based on the results of thermal  
splitting and leading to the products which were  
identical with the products of the splitting of  
holarrhymine (II), based on the difference of  
corresponding desoxitetramethyl derivatives of I

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Abs Jour: Ref Zhur-Khim., No 24, 1958, 81783.

and II, and on the difference of the molecular rotation between I and II, which corresponds to the difference between 3 $\beta$ -amino- $\Delta^5$ -steroid and 3 $\alpha$ -epimer. N, N, N', N'-tetramethyl holarrhymine (III) was allowed to stand in aqueous acetic acid and CrO<sub>3</sub> for 12 hours, and 3 $\beta$ , 20 $\alpha$ -bis-dimethylamino- $\Delta^5$ -pregnenal-18, C<sub>25</sub>H<sub>42</sub>ON<sub>2</sub> separated, m.p. 141-143°C.,  $[\alpha]_D^{25} + 8^\circ$ , which by heating for 3 hours with N<sub>2</sub>H<sub>4</sub>·H<sub>2</sub>O and KOH in triethylene glycol to 200-215°C. produced 3 $\beta$ , 20 $\alpha$ -bis-dimethylamino- $\Delta^5$ -pregnen, m.p. 140-141°C.,  $[\alpha]_D^{25} - 40^\circ$ . In the same way from N, N, N', N'-tetramethyl-I (IV) was obtained 3 $\alpha$ , 20 $\alpha$ -bis-dimethylamino- $\Delta^5$ -pregnenal-18, m.p. 164-165°C.,  $[\alpha]_D^{25} + 12^\circ$ .

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Abs Jour: Ref Zhur-Khim., No 24, 1958, 81783.

(c 2.7)., IR spectrum 1714, 2710  $\text{cm}^{-1}$ . From the  
later product was synthesized 3 $\alpha$ , 20 $\alpha$ -dimethylamin-  
 $\Delta^5$ -pregnen, m.p. 148-149 $^{\circ}\text{C}$ . [ $\alpha$ ] D - 31 $^{\circ}$  (c 2.6).  
The thermal splitting of III and IV was carried out  
basically according to the same method: by heating with  
 $\text{CH}_3\text{I}$  in alcohol, with concentration, dissolving in  
water, addition of  $\text{Ag}_2\text{O}$ , filtration, concentration and  
heating for 7 minutes up to 195-200 $^{\circ}\text{C}$ . The product  
was dissolved in ether, washed with water, and the  
ether layer was extracted with 5%  $\text{HCl}$ . From the ether  
layer was obtained  $\Delta^5$ -pregnedienoxide-18, 20,  
 $\text{C}_{27}\text{H}_{30}\text{O}$ , m.p. 97-98 $^{\circ}\text{C}$ . [ $\alpha$ ] D - 150 $^{\circ}$  (c 1.5). From  
the acidified part was obtained 18-oxy-20- $\alpha$ -di-  
methylamin- $\Delta^5$ -pregnadien  $\text{C}_{27}\text{H}_{30}\text{ON}$ , m.p. 129-130  $^{\circ}\text{C}$ .

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LABLER, L.; SORM, F.

Steroids. XLIV. 36, 18-dihydroxy-5 $\alpha$ -pregnan-20-one (18-20 cyclo-hemiketal) from holarrhimine. In English. Coll. Cz. Chem. 24 no. 9: 2975-2985 S '59. (REAI 9:5)

1. Department of Natural Products, Institute of Chemistry, Czechoslovak Academy of Science, Prague.  
(Steroids) (Dihydroxypregnanone) (Holarrhimine)



LABLER, L.; SOHM, F.; GERNY, V.

Steroids. XLVI. Partial synthesis of 3,3,20-trimethoxy-18,20-epoxy-5  $\alpha$  - pregnane from dihydroholarrhimine. XLVII. Partial synthesis of 18-benzoylamino-5 -pregnane-3 -OL-20-one from conessine. Coll Cz chem 25 no.12:4010-4021 '59. (EBAI 9:6)

1. Department of Natural Products, Institute of Chemistry,  
Czechoslovak Academy of Science, Prague.

(Steroids) (Methoxy group) (Holarrhimine)  
(Epoxy pregnane) (Amino group) (Pregnanone)  
(Conessine) (Benzoyl group)

LABLER, L.; SORM, F.

Steroids. XLIII. Partial synthesis of 18-hydroxyprogesterone from  
holarrhimine. Coll Cz Chem 25 no.1:265-269 Ja '60. (EEAI 9:12)

1. Department of Natural Products, Institute of Chemistry,  
Czechoslovak Academy of Science, Prague.  
(Steroids) (Hydroxyprogesterone) (Holarrhimine)

LABLER, L.; SORM, F.

Steroids. LIV. Some derivatives of (20R)-3 $\beta$ ,20-dihydroxypregn-5-en-18-oic acid (18-20) lactone. Coll Cz Chem 25 no.11:2855-2862 (EEAI 10:6)  
N '60.

1. Institute of Organic Chemistry and Biochemistry Czechoslovak  
Academy of Science, Prague.  
(Steroids) (Lactones)  
(Dihydroxypregnenic acid)

LABLER, L.

Steroids. LVI. An alternative route for preparation of (20R)-20-hydroxy-3-oxopregn-4-en-20-ynoic acid (18→20) lactone. Coll Cz Chem 26 no.3:724-729 (EEAI 10:9) Mr '61.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Science, Prague.

(Hydroxycyclopropanoic acid) (Lactones) (Steroids)

CERNY, V.; JOSKA, J.; LABLER, L.

On steroids. LIX. Application of thin layer chromatography without binder for rapid analytical and preparative separation of steroids. Coll Cz chem 26 no.6:1658-1668 Je '61.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Science, Prague.

(Chromatography) (Steroids)

LABLER, L.

4

CZECHOSLOVAKIA

KASAL, A; POLAKOVA, A; KAMERNITZKY, A.V.; LABLER, L; CERNY, V.

Institute of Organic Chemistry and Biochemistry,  
Czechoslovak Academy of Science, Prague (for all)

Prague, Collection of Czechoslovak Chemical Communi-  
cations, No 5, 1963, pp 1189-1195

"On Steroids. LXXVI. N<sup>3</sup>-Methylholarrhimine and N<sup>20</sup>-  
Methylholarrhimine."

CZECHOSLOVAKIA

LABLER, L.

Institute of Organic Chemistry and Biochemistry of the  
Czechoslovak Academy of Sciences, Prague

Prague, Collection of Czechoslovak Chemical Communications,  
No 6, 1963, pp 1579-1583

"On Steroids. LXXVII. Some (20S)-5 Alpha-Pregnan-18,20-  
Oxides."

CZECHOSLOVAKIA

LABLER, L; HORA, J; CERNY, V.

Institute of Organic Chemistry and Biochemistry of the  
Czechoslovak Academy of Sciences, Prague (for all)

Prague, Collection of Czechoslovak Chemical Communications,  
No 8, 1963, pp 2015-2020

"On Steroids. OXXIX. Synthesis of 3-alpha Dimethylamino-  
conan-5-ene. Corroboration of the Structure of  
Holarrhidine."



12  
CZECHOSLOVAKIA

LABLER, L; SORM, F.

Institute of Organic Chemistry and Biochemistry of the Czechoslovak Academy of Sciences, Prague (for both)

Prague, Collection of Czechoslovak Chemical Communications,  
No 9, 1963, pp 2345-2355

"On Steroids. LXXXI. The Structure of Concuressine and  
of Some Less Polar Alkaloids from Holarrhena antidysenterica  
Wall."

LABLER, L.

On steroids. Pt. 77. Coll Cz Chem 28 no.6:1579-1583  
Je '63.

1. Institute of Organic Chemistry and Biochemistry,  
Czechoslovak Academy of Sciences, Prague.

LABLER, L.; HORA, J.; CERNY, V.

On steroids. Pt. 79. Coll Cz Chem 28 no.8:2015-2020 Ag '63.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak  
Academy of Sciences, Prague.

FAJKOS, J.; JOSKA, J.; PITHA, J.; SORM, F.; ~~LABLER, J.~~

On steroids. Pts. Coll Cz Chem 28 no.9:2337-2355 S '63.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences. Prague.

LABLER, L.; CERNY, V.

On steroids. Pt 84. Coll Cz Chem 28 no.11:2932-2940 N°63.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague.

LABLER, L.

"Physical properties of the steroidal hormones" by L.L. Engel.  
Reviewed by L. Labler. Chem listy 58 no.10:1191-1192 0 '64.

③

CZECHOSLOVAKIA

LABLER, L; SAMEK, Z; SMOLIKOVA, J; SORM, F

Institute of Organic Chemistry and Biochemistry,  
Czechoslovak Academy of Sciences, Prague - (for all)

Prague, Collection of Czechoslovak Chemical Communications,  
No 5, May 1966, pp 2034-2047

"On steroids. Part 97: Isolation and structure of some  
secondary formed weak bases from Holarrhena antidysehterica."

LABNO, B.

Instruction in flying. p. 301. (SKRZYDLATA POLSKA, Vol. 10, No. 19, May 1954,  
Warszawa, Poland)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec.  
1954, Uncl.



LATNO, L.

Distr: AE34

Planysy w Polsce Reaktor Jadrowy (The First Polish Nuclear Re-  
actor), by L. Labno and K. Zarnowiecki; Warsaw, 1958, 106 pp

This booklet describes the construction and operation of the first nuclear reactor in Poland of Soviet production. It was built for experimental purposes, for scientific research, and for the production of artificial radioactive isotopes.

The reactor is of the tank type. It is immersed in a large aluminum tank filled with distilled water. The primary coolant is water and it is water-moderated. The fuel is 10% enriched uranium. The critical uranium weight is a few tens of kilograms. The fuel elements consist of thin tubular rods clad in aluminum. The rods are half a meter long and form a regular lattice of 17.5-mm spacing. The full charge consists of 800 rods containing 65 kg of uranium (hence 6.5 kg of U-235). For easier charging the rods are arranged in 52 clusters, suspended in aluminum matrices with 16 rods each. The clusters are set in a cage of aluminum, securing flow passage of the coolant between the rods. Nine holes run through the cage for control and safety rods. Around the core 8 isotope tunnels are built. In the core a neutron flux of  $2 \cdot 10^{13}$  neutron/sec/cm<sup>2</sup> is produced; in the vicinity of the tunnels the flux is lower. But flux losses are not high, because the water inside the core serves also as reflector. Although the power of the reactor is only 2,000 kw, which is not much in comparison

4. LABNO and K. ZARNOWIECKI  
with plutonium producing reactors, the neutron flux of  $2 \cdot 10^{13}$  is rather high. This paradox may be explained if we keep in mind that the whole power is released in a volume of  $0.1 \text{ m}^3$ .

Besides the vertical tunnels for isotope production, nine horizontal experimental channels surround the core radially. They permit the extraction of gamma radiation or neutrons from the core for experimental purposes. These channels are opened or closed by remote control. A tenth channel is a thermal column filled with graphite and intended to provide strong thermal neutron beams.

A water circulation system serves for heat removal from the core. The water heated in the core is sucked out by three pumps of 120 kw power and a flow rate of  $1,000 \text{ m}^3/\text{hr}$ . After passing heat exchangers the water is pumped back into the core. In the heat exchanger a second water loop cools the water. The second water loop is cooled in a large tank.

TA  
The cooling loops keep the water in the core at a temperature of  $35^\circ\text{C}$ , while the surface of the fuel elements have a temperature of  $90^\circ\text{C}$ . Such a low temperature does not produce deterioration of the fuel elements. To avoid the contamination of water by impurities, the cooling systems, the tubes, the pumps, the exchangers, and valves are made of stainless steel containing about 20% chromium and 10% nickel. The structural material used in the core is aluminum, which is resistant to activation by neutrons.

27312

P/046/60/005/011/001/018  
D249/D303

26.2244

AUTHORS: Łabno, Leszek, Dąbek, Wacław, and Byszewski, Witold

TITLE: Neutron sensitive boron-coated thermopile

PERIODICAL: Nukleonika, v. 5, no. 11, 1960, 685 - 688

TEXT: A description is given of a simple neutron flux detector developed in the Institute of Nuclear Research, of small dimensions, which consist of a thermopile with the alternate thermoelements coated with B. The detector is insensitive to  $\gamma$ -radiation or changes in the ambient temperature and operates by measuring the heat produced by neutron absorption in the B coating. The thermopile is constructed of 36 chromel-copper thermoelements, spaced at 20 mm intervals, made of 1 mm wide and 0.02 mm thick strips and welded together under an inert atmosphere with the alternate junctions covered by 1 mm beads of B. The elements are supported on a ceramic base, the junctions being situated coaxially in 3 planes perpendicular to the axis of the thermopile, with equal nos. of coated and

Card 1/3

2/312

P/046/60/005/011/001/018

D249/D303

Neutron sensitive boron-coated ...

bare junctions in each plane. The whole assembly is placed in an Al sheath. Only the changes in ambient temperature which occur over  $\sim 10$  seconds will affect the instrument, since the decay of the output thermoelectric power has been found to have a time constant of 8 secs. Response of the thermopile varies linearly with the power level of the reactor. ( $1 \times 10^{11}$  mV/n.  $\text{cm}^2$  sec), up to  $\sim 200$  kW which corresponds to  $10^{12}$  n/ $\text{cm}^2$  sec. Sensitivity diminishes, thereafter, owing to the heating of uncoated junctions becoming, for example,  $0.9 \times 10^{-11}$  mV/n  $\text{cm}^2$  at 2 MW ( $\sim 10^{13}$  n/ $\text{cm}^2$  sec). To test the instruments, neutron flux distribution in the 36/14 channel of the WWR-S reactor was measured by an absolute method using P and compared with the results given by the thermopile detector. Good agreement was obtained and the slight discrepancy is ascribed to the non-linearity of the thermopile. There are 3 figures and 4 references: 1 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: G. Barbares, et al.: AECD - 2485; 1949, and AECD - 2975, 1950; T.R. Herold, Nucleoniks 13, no. 5, 64, 1955; T.A. Jaques, H.A. Ballinger, F. Wade,

Card 2/3

Neutron sensitive boron-coated ...

27312  
S/046/60/05/011/001/018  
D249/D303

Proc. IEE, 100, 110, 1953.

ASSOCIATION: Institute of Nuclear Research, Warsaw

SUBMITTED: July 1960

4

Card 3/3

27317

P/046/60/005/011/006/018

D249/D303

26.2223

AUTHORS: Byszewski, Witold, Aleksandrowicz, Jerzy, and  
Kabno, Leszek

TITLE: Temperature measurements of the WWR-S reactor fuel  
element wall

PERIODICAL: Nukleonika, v. 5, no. 11, 1960, 727 - 736

TEXT: A method of temperature measurement was developed using  
chromel-alumel thermocouples attached to the can of a fuel element. ✓  
The temperature distribution along the fuel element were measured  
for a range of output power levels. The authors' aim was to inves-  
tigate the possibility of increasing the power output of the reac-  
tor. The rather small dimensions of the fuel rod (10 mm diameter,  
2 mm wall thickness) and a large temperature difference between  
the rod and the water added difficulty to setting up the measure-  
ments. Six symmetrical slots, 0.5 mm deep and 0.8 mm wide, were  
machined on the outside of the jacket to different lengths in order

Card 1/3

27317  
P/046/60/005/011/006/018  
D249/D303

Temperature measurements of ...

to accomodate the thermocouples. The thermocouples were placed in thin aluminum tubes and pressed into the slots. It was essential to achieve a good thermal contact between the joints of the thermocouples and the aluminum jacket, and for this purpose a special method of soldering was developed, but it was discovered later that fastening with a thin aluminum wire proved more satisfactory. The performance of the arrangement was first tested on a dummy rod with heater placed inside the tube. Two series of measurements were performed inserting the modified fuel element with the attached thermocouples into two different channels of the reactor. The power output of the reactor varied from 0 to 2 kW and the temperatures registered by the six thermocouples were noted, as well as the water temperatures of the external cooling circuit. The measurements were performed at two rates of flow of the cooling water: 960 and 660 m<sup>3</sup>/hour. It was shown that the temperature difference between the wall of the fuel element and the water is proportional to the power output of the reactor at a constant flow of water; a maximum value observed was 27.4°C, in disagreement with the calcu-

Card 2/3

27317

Temperature measurements of ...

P/046/60/006/011/006/018  
D249/D303

lated value of 50°C as supplied by the designers of the reactor. It is stated that in winter conditions the temperature of the jacket of the fuel element is well below the boiling point of water, but in hot weather there is not much room for increasing the output of the reactor. There are 10 figures and 2 tables.

ASSOCIATION: Instytut badań jądrowych, Warszawa, Oddział eksploatacji reaktora (Institute of Nuclear Research, Warsaw, Reactor Operation Division)

SUBMITTED: July, 1960

Card 3/3



ACCESSION NR: AP4011800

P/0053/63/000/012/0713/0716

AUTHOR: Labno, Leszek; Dabek, Wacław; Kazimierski, Adam

TITLE: Thermoelectric neutron detector

SOURCE: Przegląd elektroniki, no. 12, 1963, 713-716

TOPIC TAGS: detector, neutron detector, thermoelectric neutron detector, thermoelement, thermoelectric couple, chromel-copel thermoelement, chromel-alumel thermoelement

ABSTRACT: The Polish Institute of Nuclear Research developed and tested a series of thermoelectric detector designs. One model was finally accepted on basis of experimental findings. It consists of 36 chromel-alumel thermoelectric couples which were stamped out of a strip about 0.02 mm thick and about 1 mm wide. The stability of chromel-copel couples was found to be inferior to that of chromel-alumel couples in the presence of a neutron flux. Their corrosion resistance is also inferior to the chromel-alumel couple. This detector produces a signal from 0.1 to 100 millivolts at a neutron flux from  $10^{10}$  to  $10^{13}$  neutrons/cm<sup>2</sup>sec. The static characteristic was tested for this detector. Variations in the thermoelectric force of a detector containing 18 pairs of chromel-copel thermoelements as a function of reactor power

Card 1/2

ACCESSION NR: AP4011800

have a linear path up to a power of about 200 kilowatts, which corresponds to a neutron flux of about  $10^{12}$  neutrons/cm<sup>2</sup>sec at the point where the detector is inserted. The sensitivity of the detector is about  $10^{-11}$   $\frac{\text{millivolt}}{\text{neutron/cm}^2\text{sec}}$  in this part of the characteristic. The detector's sensitivity diminishes with higher power owing to an increase of radiation effect during the heat transfer process between the boron-covered weld and housing. With a reactor power of 2 megawatts, which corresponds to a flux of about  $10^{13}$  neutrons/cm<sup>2</sup>sec, the sensitivity diminishes to about  $0.9 \times 10^{-11}$   $\frac{\text{millivolt}}{\text{neutron/cm}^2\text{sec}}$ . Orig. art. has: 4 figures.

ASSOCIATION: Przemyslowy Instytut Elektroniki (Industrial electronics institute)

SUBMITTED: 00

SUB CODE: FH, GE

DATE ACQ: 10Feb64

NO REF SOV: 000

ENCL: 00

OTHER: 000

Card 2/2

LAENO, Tadeusz

Attempts at surgical treatment of Perthes disease. Chir.  
narząd. ruchu ortop. Pol. 30 no.2:171-176 '65.

1. Z Oddziału Ortopedii Dziecięcej Szpitala Wojewodzkiego  
w Bydgoszczy.

HUNGARY

KRAJCSOVICS, Pal, Jr. Dr; LABODA, Irma, Dr; St. Anna's Hospital of Paszto,  
Medicine Department (Pasztoi Jarnasi Korhaz, Balaszataly)

"Repeated Myocardial Infarct at Age 30."

Budapest, Orvosi Hetilap, Vol 104, No 1, 6 Jan 63, pages 24-25.

Abstract: [Authors' summary] The authors report on two myocardial  
infarct attacks of a 30 year old male patient. They call attention to  
the great increase of infarcts among young adults. They stress that in  
cases of combined complaints of a digestive and stenocardiac nature,  
myocardial infarct has to be considered in spite of indefinite laborat.  
findings in the beginning.

[11 Western, 4 Hungarian references]

L

1/1

KRAJCSOVICS, Pal, ifj. dr.; LABODA, Irma dr.

Repeated myocardial infarct in a 30-year-old patient. Orv. hetil. 104  
no.1:24-25 6 Ja '63.

1. Pasztoi János Kórház, Belosztaly.  
(MYOCARDIAL INFARCT) (ALCOHOLISM)  
(SMOKING)

L 34081-66 EWP(c)/EWP(v)/EWP(t)/ETI/EWP(k)/EWP(h)/EWP(l) IJP(c) JD/JG  
 ACC NR: AP6025497 SOURCE CODE: HU/0012/66/000/003/0085/0088

AUTHOR: Laboda, Sandor--Laboda, Sh. (Graduate metallurgical engineer)

ORG: State Mint (Allami Penzvero)

TITLE: Applications of noble and common metals for temperature measurement

SOURCE: Meres es automatika, no. 3, 1966, 85-88

TOPIC TAGS: temperature measurement, thermocouple, platinum alloy, palladium alloy, rhodium alloy, rhenium containing alloy, osmium containing alloy, molybdenum containing alloy, tungsten containing alloy, gold alloy

ABSTRACT: The thermoelectrical properties of platinum/palladium-rhodium alloys with and without alloyants such as rhenium, osmium, molybdenum, tungsten, and gold were determined. The suitability of various combinations of concentrations for thermoelectric temperature determination was discussed on the basis of the data obtained. The thermal voltages recorded for the various specimens were presented. Thermocouples from noble elements outperformed consistently those from common metals.

Orig. art. has: 5 figures and 2 tables. [JPRS: 36,646]

SUB CODE: 11, 09 / SUBM DATE: 21Jun65 / ORIG REF: 002 / OTH REF: 003

Card 1/1 *20*

UDC: 546.5:536.5

*0916*

*0876*

62718-65 KPF(c)/EWP(b)/EWA(d)/EWP(t) JD/WB  
ACCESSION NR: AT5021537

HU/2502/64/042/003/0191/0205

AUTHOR: Devay, J. (Devai, Y.) (Doctor); Szegedi, Robert (Segedi, R.); Labady, I.  
(Labodi, I.) 44,55 44,55 36 35 841

TITLE: Effect of alternating current on the electrolytic corrosion of steel.  
Part 1: Model measurements of the action of alternating current on the corrosion of steel

SOURCE: Academia scientiarum hungaricae. Acta chimica, v. 42, no. 3, 1964, 191-205

TOPIC TAGS: electrolysis, steel, metal surface, corrosion rate, corrosion, alternating current 17,44,55

ABSTRACT: Alternating current promotes the rate of steel surface corrosion, alters the corrosion caused by the activity of localized elements, and contributes to the development of surface corrosion phenomena by its non-homogeneous distribution. By means of model measurements it was established that the phenomena can be interpreted by the effect of the alternating current on polarization and on the rates of the electrode processes involved. Orig. art. has: 3 figures, 16 graphs.

Card 1/2

62718-65

ACCESSION NR: AT5021537

3

ASSOCIATION: Department of Physical Chemistry and Radiochemistry, L. Eotvos  
University, Budapest; Group for Electrochemistry, Department of Physical Chemistry,  
University of Chemical Industry, Veszprem

SUBMITTED: 08Jan64

4435

ENCL: 00

SUB CODE: MM, EM

NR REF SOV: 000

OTHER: 013

JPRS

Card 2/2



L 62719-63 EFF(c)/EWP(b)/EWA(d)/EWP(t) JD/WB  
 ACCESSION NR: AT5021538 HU/2502/64/042/003/0207/0226  
 AUTHOR: Devay, Jozsef (Deval, Y.) (Doctor); Szegedi, Robert (Segedi, R);  
 Labody, I. (Labodi, I.) 74.55 32  
 29  
 0+1  
 TITLE: Effect of alternating current on the electrolytic corrosion of steel.  
 Part 2. Laboratory measurements of corrosion affected by alternating current  
 SOURCE: Academia scientiarum hungaricae. Acta chimica, v. 42, no. 3, 1964, 207-226  
 TOPIC TAGS: alternating current, steel, metal surface, corrosion, pipe  
 ABSTRACT: Laboratory measurements conducted on steel rods confirmed the general findings reported in part 1 of this series (Acta Chimica Academiae Scientiarum Hungaricae, vol 42, no 3, Dec 1964, pp1191-205; same issue, preceding article) on the basis of model experiments. It was assumed that the corrosive effect of the alternating current on the homogeneous metal surface and on the local elements is combined with the corrosion effect caused by the non-homogeneous distribution of the alternating current. Orig. art. has: 4 formulas, 1 table, 11 graphs, 9 figures.

Card 1/2

L 62719-65

ACCESSION NR: AT5021538

ASSOCIATION: Group for Electrochemistry, Department of Physical Chemistry,  
University of Chemistry Industry, Veszprem.

SUBMITTED: 08Jan64

44.55

ENCL: 00

SUB CODE: MM, EE

NR REF BOV: 000

OTHER: 002

JPRS

Card 2/2

LABOHY, Ladislav, MUDr; PICK, Jaroslav, MUDr

Acute allergic myocarditis after vaccination against scarlet fever.  
Cas.lek.cesk. 91 no.12:363-368 21 Mar 52.

1. Z interniho oddel. statni oblastni nemocnice v Havlickove  
Brode. Prednosta: MUDr L.Labohy. Z interniho ambulatoria ONP v  
Chotebori. Prednosta: MUDr J. Pick.

(MYOCARDITIS,

allergic, after vacc. against scarlet fever)

(SCARLET FEVER, prevention and control,  
vacc., causing allergic myocarditis)

(VACCINES AND VACCINATIONS,  
scarlet fever, causing allergic myocarditic)

(ALLERGY,

myocarditis after vacc. against scarlet fever)

LABOHY, Ladislav

CYRAN, Václav, MUDr.; LABOHY, Ladislav, MUDr.; REJČEK, Milan, MUDr.

Neurilemmoma ventricul: multiolex. Rozhl. chir. 35 no.3:153-157  
Mar 57.

1. z chirurgického odd. (primar Dr P. Trnka, nositel Prahu arace) a  
z interního odd. (primar Dr I. Labchy) nemocnice Havlíčkův Brod.

(STOMACH NEOPLASMS, case report

multiple neurilemmoma of anterior wall (Case)

(NEURILEMMOMA, case report

multiple of anterior wall of stomach (Case)

3

CZECHOSLOVAKIA

ROSLAN, J., MD; LABOHY, L., MD; ZITA, C., MD

Internal Medicine Ward of the Hospital (Vnitřní oddělení  
nemocnice), Prague (for all)

Prague, Praktický lékař, No 11, 1963, pp 418-419

"General Principles in Treatment of Green Mushroom  
Poisoning - *Amanita phalloides*."

MEZOK, D.M.

Prolonged anesthesia in traumatology and orthopedics. Khirurgia,  
Moskva no.3:12-15 Mar 1952. (CLML 22:1)

1. Professor. 2. Of the Central Institute of Traumatology and Ortho-  
pedics of the Ministry of Public Health USSR (Director -- Prof. N. N.  
Pridorov). Corresponding Member AmS USSR).

LABOK, D.M., prof.

Results of treating spine fractures. Zdrav. Turk. 7 no.11:  
11-13 N°63 (MIRA 17:3)

1. Iz kafedry khirurgii, travmatologii i ortopedii fakul'teta  
usovershenstvovaniya vrachey ( zav. - prof. D.M. Labok) Turk-  
menskogo gosudarstvennogo meditsinskogo instituta.

LOKSHIN, Sh.Z.; LABOK, L.Yu.

Displacement of an elastic half plane under the effect of forces  
at the end distance from the edge. Trudy LKI no.38:109-115 '62.  
(MIRA 16:7)

1. Kafedra stroitel'noy mekhaniki korablya Leningradskogo  
korablestroitel'nogo instituta.  
(Deformations (Mechanics))



LABOE, O.P., inzhener.

Simple automatic redlosing group circuit for 6 kv.lines. Elek.  
str. 28 no.1:85-86 Ja '57. (MLRA 10:3)  
(Electric circuit breakers)

LABOK, P.

"Labor statistics in industry and construction" by M.V.Daragan,  
N.V.Rutkovskaia, B.B.Bronshtein; "Studies on labor statistics" by  
IA.D.Kats. Reviewed by P.Labok. Sots. trud 6 no.4:151-154 Ap  
'61. (MIRA 16:7)

(Labor and laboring classes—Statistics)  
(Daragan, M.V.) (Rutkovskaia, N.V.) (Bronshtein, B.B.) (Kats, IA.D.)

LABOK, S., vrach; SYROVADKO, O., vrach.

Labor hygiene in a chemical plant. Sov. profsoiuzy 20 no.1:48 Ja  
'64. (MIRA 17:2)

LABOK, S. I.

PA 49/49T61

USSR/Medicine-Industry and Occupation, 200 Oct 48

Hygiene  
Medicine-Metallic Mercury, Effect of

Medical Instructions for Laborers Working With  
Metallic Mercury, "S.I. Labok, Inst of Labor Hygiene  
and Occupational Diseases, Acad Med Sci USSR, 32 pp

"016 1 Ben" No 10

Observation showed that carefully planned instruc-  
tions for new laborers in medico-technical training  
room of "Tschimereitel's" Factory acquaint them  
with the dangerous nature of the material with which  
they will come in contact. Obtained successful  
results in the control of mercury intoxication with

49/49T61

USSR/Medicine-Industry and Occupation, Oct 48  
Hygiene (Contd)

rational medico-technical and technological measures  
includes three illustrations.

49/49T61

LABOK, Z.L.

4544

LABOK, Z.L. i KOVALEV, YE. S. Rekonstruktsiya vrashchayushchikhsya  
pechey na podel'skom tsementnom. zovade. m., promstroyizday, 1954.  
s. s chert.; 3 l. chert. 20 sm. (novatory prom-sti stroit. materialov).  
2.000 ekz. 1 r. 20 k. (55-158) p

666.94.041-77

KAVALENKO, K.A.-ustroystvo dlya mekhanicheskoy podachi dosck na  
tsirkul'nyyu pil.-(t. b. monesova. mekharizm dlya vyrabotki  
steklyannykh ugol'nikov).- sm 4557

SO: Knizhnaya Letopis', Vol. 1, 1956

LABONEK, Frantisek

1ST AND 2ND ORDERS												3RD AND 4TH ORDERS											

PROCESSES AND PROPERTIES INDEX

13668\* Hardenability of Steel and Its Determination. (In Czech.) Ladislav Janicek, Jaroslav Koutecky, and Frantisek Labonek. *Hutnické Listy*, v. 6, Jan. 1951, p. 5-14; Feb. 1951, p. 70-75; Mar. 1951, p. 119-125; May 1951, p. 220-225; June 1951, p. 270-288.

The problem of cooling a quenched body was formulated, in a general way, in Part II. Using this formulation as a basis, dimensionless factors influencing the temperature distribution within a quenched body are suggested. G. Sachs' crystallization theory was used to show that, after making certain assumptions, diagrams of isothermal break-down of austenite can serve as criteria for hardenability. In Part II, results of experimental quenching of Jominy test-bars, test wedges, hollow cones, and cylinders of 4 different steel compositions are presented. Diagrams and nomograms for various shapes are constructed. Making use of such diagrams, the progress of hardness found experimentally was verified. Good agreement was found between theory and experiments. 58 ref.

✓

mt

10108 Comparison of Various Methods of Determining Austenitic Grain Sizes in Steel. (Czech.) F. Labanek and L. Jenicek. *Hutnické Listy*, v. 7, Apr. 1952, p. 171-178. Presents a detailed discussion of the above. The "fracture grain size" method is recommended for general use, the Gerastimenko and Cu-diffusion methods should be used only for quality control, and the McQuaid-Ehn method should be used only for carburizing steels. 92 ref.

LABONEK, F

✓ Comparison of some Hardenability Tests in the Case of  
some Steels of Low Hardenability. F. Labonek. (Hutnicki  
M G r, 1968, 10, (3), 163-168). [In Czech.] The Jominy,  
Shepherd, and fracture tests of determining hardenability  
were applied to three types of frequently used carbon tool  
steels, and the results were compared. The common fracture  
test, which also permits grain-size evaluations and an  
assessment of the liability to burning, was found most  
appropriate.—P. P.

of up met





LABONEK, Frantisek, inz., dr.

Improved method of annealing the antifriction bearing steel with regard to the content of the Ni, cu and Mn. Hut listy 16 no.7:471-475 J1 '61.

1. Spojene ocelarny, narodni podnik, Kladno.

LABONEK, Frantisek, dr., inz.

Effect of nickel and copper on the transformation temperature,  
hardenability and quantity of residual austenite after hardening  
of the steel to be used for antifriction bearings. Hut listy 17  
no. 8:543-548 Ag '62.

1. Spojene ocelarny, narodni podnik, Kladno.

L-18505-66 EWA(d)/EWP(t) JD

ACC NR: AP6010252

AUTHOR: Labonek, Frantisek (Engineer; Doctor; Doctor of sciences)

SOURCE CODE: CZ/0034/65/000/003/0190/0194

ORG: SONP, Kladno

TITLE: Conditions for the globular pearlite formation in the annealing of hypereutectoid steels with particular reference to antifriction bearing steels

SOURCE: Hutnicke listy, no. 3, 1965, 190-194

TOPIC TAGS: pearlite, annealing, hypereutectoid steel, carbon steel, antifriction metal, bearing steel, austenite, carbide

ABSTRACT: The mechanism of kinetics of the pearlite transformation in hypereutectoid carbon steels is described. Formation of the lamellar pearlite, and of the globular pearlite are discussed. A model of the lamellar pearlite formation is described, as well as the model for the intrinsic globular pearlite formation. The shape of the original nucleus determines the final structure of the pearlitic transformation. Conditions for the formation of a definite nucleus type (oriented lamellar or globular) result from the initial structure condition that is by the

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L 18505-66  
ACC NR: AP601052

homogeneity of the austenite, and the amount of globular carbides. High annealing temperatures, quicker cooling after annealing, and long annealing periods favor lamellar structure. Presence of Cr, Ni, and Cu slow down lamellar structure formation. Results of an experiment of 1000 hours are given. Orig. art. has 5 figures. / JPRS /  
SUB CODE: 11,13 / SUB DATE: none / ORIG REF: 006 / OTH REF: 013 / SOV REF: 008  
Card 2/2  
UDC: 669.112.227.322.1: 669.14.018.251

L 26045-66 T/EMP(t) IJP(c) JD/WW/DJ

ACC NR: AP5025474

SOURCE CODE: CZ/0065/65/000/004/0333/0360

AUTHOR: Labonek, Frantisek -- Labonek, Frantishek

ORG: State-Owned United Steel Works, Kladno (Spojene ocelarny, nar. podnik)

TITLE: Effect of nickel and copper on reactions occurring during annealing of steel for anti-friction bearings

SOURCE: Kovove materialy, no. 4, 1965, 333-360

TOPIC TAGS: annealing, steel, nickel, ~~containing alloy~~, copper, ~~containing alloy~~, carbide phase, ~~metallurgy~~, pearlite steel, ~~austenite~~, ~~metal analysis~~, ~~anti friction bearing~~

ABSTRACT: The behavior of the carbide phase was studied during exposure of steel to annealing temperatures, during cooling of steel until austenite is converted into pearlite, and during further slow cooling. Four melts containing 1% C, 1.6% Cr, and various amounts of Ni and Cu (0.19 - 1.14%) were heated to  $760 \pm 20^\circ\text{C}$ , held at this temperature for 4 hours, cooled in the furnace to  $< 650^\circ\text{C}$  at a rate of  $10 \pm 5^\circ\text{C}$  and then in air. The behavior of the carbide phase (changes in the total volume and surface of the carbide phase and their distances, the process of

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L 26045-66

ACC NR: AP5025474

pearlite transformation resulting in the formation of spheroidite) was studied by the quantitative metallographic method. The rate of dissolving the carbide phase and the decrease and growth of carbides were determined. The corresponding energy of the diffusion activation (Q) was determined for a steel containing 0.56% Ni+Cu, where Q=30,500 cal/g atom. The diffusion rate characterized by the diffusion coefficient (D) was determined as  $D = A \cdot e^{-\frac{Q}{RT}}$ ; where A is a material constant independent of the temperature, R is the gas constant equal to 1.987 cal/g atom, and T is the absolute temperature. The presence of Ni and Cu in steels affected all stages of annealing, and an increase in the amount of Ni and Cu decelerated the processes which occurred during annealing. The presence of Ni and Cu in the amounts studied did not affect the diffusion of C in austenite, but slowed down the diffusion of Cr. This effect increased with an increased amount of Ni and Cu, reflected in a moderate increase in the working process necessary for the formation of nuclei of the carbide phase. During pearlite transformation, the presence of Ni and Cu dissolved in austenite affected both the diffusion, necessary for the distribution of alloy elements (Cr), and a decrease in the rate of the polymorphic transformation  $\gamma \rightarrow \alpha$ . Together with the Cr, the Ni and Cu increased the working process necessary for the formation of nuclei and the energy of activation of the process. Orig. art. has: 18 formulas, 9 fig. and 6 tables.

SUB CODE: 11/3/ SUBM DATE: 13Jul64/ ORIG REF: 006/ SOV REF: 013/ OTH REF: 008  
Card2/2

I 26045-66 T/EMP(t) IJP(c) JD/HW/DJ

ACC NR: AP5025474

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SUB CODE: 11/3/ SUBM DATE: 13Jul64/ ORIG REF: 006/ SOV REF: 013/ OTH REF: 003  
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FEHER, Otto; LABOR, Elemer; MOZSIK, Gyula; SZABO, Tibor

Effect of d-tubocurarine, nicotine and some tropane derivatives on the ganglionic stimulation transmission. Acta physiol Hung 20 no.2:177-186 '61.

1. Orvostudományi Egyetem Elettani Intézete, Debrecen.

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LABORSKIY, K.P. (Moskva); ROZENTAL', A.L. (Moskva) EGLIT, A. Kh. (Moskva)

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FEHER, O.; LABOS, E.; MOZSIK, Gy.; SZABO, T.

Effect of d-tubocurarine, nicotine and individual tropane compounds  
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1. Physiologisches Institut der Medizinischen Universität, Debrecen.

(CURARE pharmacol)	(NICOTINE pharmacol)
(ATROPINE rel cpds)	(GANGLIA AUTONOMIC pharmacol)